**AMENDMENTS TO THE SPECIFICATION:**

Please REPLACE the paragraph bridging pages 1 and 2 of the Specification with the following amended paragraph:

An effective way to improve this situation is to increase the thickness of the line electrode 6 and to reduce the current density at the edges 7 and 8 of the line electrode 6. ~~Fig. 24~~ Figs. 24A and 24B ~~is a~~are graphs of the transmission characteristics (calculated) for the microstrip line 1 when the thickness of the line electrode 6 is varied. In Fig. 24~~(A)~~, Qo is the resonance when the microstrip line 1 is cut to a specific length and made into a resonator. The value of Qo increases as the conductor loss of the line electrode 6 decreases. ~~Zo in~~ In Fig. 24~~(B)~~, Zo is the characteristic impedance of the microstrip line 1, and $K_{eff}$ is the effective dielectric constant of the dielectric substrate 2.

Please REPLACE the first full paragraph on page 2 of the Specification with the following amended paragraph:

The microstrip line 1 used in the calculation of transmission characteristics for ~~Fig. 24~~Figs. 24A and 24B was configured such that the dielectric constant of the dielectric substrate 2 was 38, the thickness of the dielectric substrate 2 was 300 μm, and the width of the line electrode 6 was 20 μm. As is clear from Figs. 24A and 24B, when the thickness of the line electrode 6 is varied over a range of 1 μm to 25 μm, the characteristic impedance Zo and the effective dielectric constant Keff changes very little. In contrast, the Qo value increases in proportion to the thickness of the line electrode 6, which indicates that the conductor loss decreases.

Please REPLACE the last full paragraph on page 2 of the Specification with the following amended paragraph:

The microstrip line shown in Fig. 25 is discussed in "Multilayered MMIC, V-Groove Microstrip Line Characteristics," by Hasegawa et al., 1990 Electronic Information Communications Society, National Fall Conference, lecture C-55. A microstrip line 10 has a V-shaped groove 13 provided on the front 12 of a dielectric substrate 11, and a V-shaped line electrode 14 having a crease 15 is provided in the middle of this groove 13. As a result, the electric field is concentrated between the V-shaped lower end portion of the line electrode 14 and a ground electrode 16 provided on the back of the dielectric substrate 11, thereby reducing the concentration of current at the edges 17 and 18 of the line electrode 14.

Please REPLACE the first full paragraph on page 3 of the Specification with the following amended paragraph:

Furthermore, Japanese Laid-Open Patent Application 8-288463 discloses a microstrip line in which the transmission loss of the line is decreased by utilizing a skin effect. As shown in Fig. 27, this microstrip line 30 includes a ground electrode 33 provided on the back 32 of a dielectric substrate 31, and a line electrode 38 provided on the front 34 of the dielectric substrate 31, on the sides 35 and 36 of the line electrode 38 a plurality of ~~bumps~~ grooves 37 are provided. This expands the surface area of the sides 35 and 36 of the line electrode 38, thereby increasing surface current at the sides 35 and 36 and reducing transmission loss.

Please REPLACE the fifth paragraph on page 10 of the Specification with the following amended paragraph:

~~Fig. 2~~Figs. 2A and 2B show~~s~~ the transmission characteristics of the microstrip line in Fig. 1, with Fig. 2~~(A)~~ being a graph of the Qo value versus the height of the edge

electrodes, and Fig. 2~~(~~B~~)~~ a graph of the characteristic impedance and effective dielectric constant versus the height of the edge electrodes.

Please REPLACE the paragraph bridging pages 10 and 11 of the Specification with the following amended paragraph:

~~Fig. 5~~Figs. 5A and 5B shows the transmission characteristics of the microstrip line in Fig. 4, with Fig. 5~~(~~A~~)~~ being a graph of the Qo value versus the vertical height of the edge electrodes, and Fig. 5~~(~~B~~)~~ a graph of the characteristic impedance and effective dielectric constant versus the vertical height of the edge electrodes.

Please REPLACE the eleventh full paragraph on page 11 of the Specification with the following amended paragraph:

Figs. 16A, 16B, 16C and 16D ~~is a~~are diagrams of the method for producing the microstrip line in Fig. 15, with Fig. 16~~(~~A~~)~~ and Fig. 16~~(~~B~~)~~ being oblique views of dielectric sheets, Fig. 16~~(~~C~~)~~ a detail cross sectional oblique view of the dielectric sheet, and Fig. 16~~(~~D~~)~~ a detail cross sectional oblique view of the laminated unit.

Please REPLACE the fifth paragraph on page 12 of the Specification with the following amended paragraph:

Figs. 24A and 24B shows the transmission characteristics of the microstrip line in Fig. 23, with Fig. 24~~(~~A~~)~~ being a graph of the Qo value versus the thickness of the line electrode, and Fig. 24~~(~~B~~)~~ being a graph of the characteristic impedance and effective dielectric constant versus the thickness of the line electrode.

Please REPLACE the paragraph bridging pages 13 and 14 and the first and second full paragraphs on page 14 of the Specification with the following amended paragraphs:

As is clear from Figs. 2A and 2B, as the height t of the edge electrodes 48 and 49 increases, the Qo value of the microstrip line 40 increases, which indicates that there is a decrease in the conductor loss in the strip conductor 45. Also, even when the height t of the edge electrodes 48 and 49 is increased, the characteristic impedance Zo of the microstrip line 40 and the effective dielectric constant Keff of the dielectric substrate 41 remain substantially the same.

When the transmission characteristics of the microstrip line 40 shown in Figs. 2A and 2B are compared to the transmission characteristics of the microstrip line in ~~Fig. 24~~Figs. 24A and 24B (conventional example), the increase in the Qo value of the microstrip lines exhibits substantially the same tendency. We can conclude from this that the edge electrodes 48 and 49 of the strip conductor 45 have the same effect as increasing the thickness of the line electrode 46, and that the edge effect of the line electrode 46 is greatly reduced by the edge electrodes 48 and 49.

The ground electrode 43 and the strip conductor 45 are formed by thin film formation technology using a good conductor such as copper, silver, or gold, or other suitable material, such that the dimensions of these components (~~eg~~e.g., thickness, width, and height) are set with high precision, and variances in the characteristic impedance Zo of the microstrip line 40 and variance in conductor loss in the microstrip line 40 are minimized during manufacture.

Please REPLACE the third paragraph on page 16 of the Specification with the following amended paragraph:

The insulating films that define the reinforcing components 56 and 57 can be, for example, a resin material with a small dielectric loss tangent and a low dielectric constant, such as BCB (benzocyclobutene) or polyimide resin, or a ceramic material with a low dielectric constant. BCB having a low dielectric constant of about 2.3, and a ceramic material with a dielectric constant of about 7.3 and a dielectric loss tangent of about ~~1.e—4~~.0001 to ~~1.e—3~~.001 can be used.

Please REPLACE the third and fourth paragraphs on page 17 of the Specification with the following amended paragraphs:

Figs. 5A and 5B show~~s~~ the transmission characteristics of the microstrip line 55 when the reinforcing components 56 and 57 are provided. These transmission characteristics are shown as the calculated values when the edge electrodes 53 and 54 are vertical ($\theta = 90°$), and as the calculated values when the edge electrodes 53 and 54 are inclined at 70 degrees ($\theta = 70°$) and 80 degrees ($\theta = 80°$). In this example, BCB insulating films are preferably used for the reinforcing components 56 and 57 when the angle $\theta$ is about 70 degrees and about 80 degrees.

In the graphs of Figs. 5A and 5B, "height h" refers to the projected height of the inclined edge electrodes 53 and 54. The dielectric substrate 41 preferably has a thickness of about 300 μm and a dielectric constant of about 38, and the line electrode 52 has a thickness of about 5 μm and a width of about 20 μm. The thickness of the edge electrodes 53 and 54 is about 5 μm. The thickness of the reinforcing components 56 and 57 varies with the angle of inclination of the edge electrodes 53 and 54, and is equal to the projected height h of the edge electrodes 53 and 54.

Please REPLACE the first full paragraph on page 18 of the Specification with the following amended paragraph:

When the microstrip line 55 is configured as described above, with the edge electrodes 53 and 54 inclined and the strip conductor 51 supported by the reinforcing components 56 and 57, the transmission characteristics similar to the transmission characteristics shown in Figs. 2A and 2B for the microstrip line 40 of the first preferred embodiment, and the conductor loss of the microstrip line 55 is greatly reduced.

Please REPLACE the first full paragraph on page 22 of the Specification with the following amended paragraph:

With ~~this~~the configuration of the microstrip line 90 shown in Fig. 13, the internal space in a strip conductor 91 surrounded by the line electrode 52, the edge electrodes 53 and 54, and the flat electrode 87 is filled with a filler 92 having a small dielectric loss tangent, such as the BCB resin or other resin material that defines the reinforcing components 56 and 57, a ceramic material, or another suitable insulating substance. The effect of this configuration is that the flat electrode 87 can be formed after the line electrode 52 and the edge electrodes 53 and 54 have been formed and filled with the filler, which facilitates production of the strip conductor 91.

Please REPLACE the first full paragraph on page 24 of the Specification with the following amended paragraph:

The method for manufacturing the microstrip line 100, and particularly the method for producing the second lamination component 103 portion, will now be described with reference to Figs. 16A, 16B, 16C and 16D. First, the dielectric sheet (green sheet) 110 shown in Fig. 16~~(A)~~ is produced. Suitable amounts of binder, plasticizer, and solvent are added to a ceramic or glass ceramic powder, and these are kneaded to produce a slurry. The inorganic material used as the binder is preferably a low-loss material with a low baking temperature, whose main components are a

material based on BaO-$TiO_2$-rare earth oxide, and borosilicate glass, such as Mg-Al-Si-B-O. The slurry obtained in this manner is applied by doctor blade to form the dielectric sheet 110 having the desired thickness.

Please REPLACE the third full paragraph on page 24 of the Specification with the following amended paragraph:

As shown in Fig. 16B, ~~The~~the line formation hole 106 having a width of about 250 µm is formed with an NC puncher in and completely through this dielectric sheet 110. The length of the line formation hole 106 is the length required for design purposes. In addition to punching with an NC puncher, laser punching, mold tool punching, mechanical cutting, or another suitable method can be used to form the line formation hole 106.

Please REPLACE the third full paragraph on page 28 of the Specification with the following amended paragraph:

As shown in Fig. 18, a filter 135 is provided with four resonator devices 120 that are configured as shown in Fig. 17, and includes five electrode supports 136, ~~to~~137, 138, 139, 140 disposed substantially parallel to each other and equidistantly spaced on the front 44 of the dielectric substrate 41, four strip conductors 141, ~~to~~142, 143, 144 arranged in a lateral row and provided between the adjacent electrode supports 136, ~~to~~137, 138, 139, 140, and linking electrodes 145 and 146 that extend in the arrangement direction on the electrode supports 136 and 140 and connect to a flat component 130 of the strip conductor 141 located at the beginning of the lateral row, and to a flat component 131 of the strip conductor 144 located at the end of this row.

Please REPLACE the fourth paragraph on page 31 of the Specification with the following amended paragraph:

A specific example of the transmission circuit of the high frequency circuit 171 will be described through reference to Fig. 22. A transmission circuit 180 includes an input terminal 181 for inputting an IF signal from the signal processing circuit 172 <u>shown in Fig. 21</u>, a mixer 182 that is connected to the input terminal 181 and converts an IF signal into an RF signal, a local oscillator 183 for supplying a carrier signal to the mixer 182, a power amplifier 184 for boosting the power of the RF signal outputted from the mixer 182, a bandpass filter 185 for removing unnecessary signals from the amplified RF signal, and an output terminal 186 for outputting the RF signal from the bandpass filter 185 to the antenna 173.